

## **REMARKS**

### **Summary**

Claims 1, 2 and 4 -20 were pending. All of the pending claims were rejected in the present Office action. Claim 3, previously withdrawn, has been cancelled without prejudice. Claims 2 and 12 have been amended. No new matter has been introduced. The Applicants respectfully request that the Office action be withdrawn and that a new Office action issue. The basis of the request is that the rejections under 35 U.S.C. § 103(a) have only specifically addressed the application of the references to Claims 1 and 2, and therefore the Applicants have not received a full first action on the merits of the claims presented and are therefore not in a position to either amend the claims or rebut the Examiner's rejection of the remaining claims. As a specific example, Claim 11 was not rejected on any specified grounds. Additionally, the Applicants respectfully traverse the rejections made in the present Office action.

### **Response to the Examiner's Response**

In the Response to Arguments, the Examiner has required a clarification regarding the shape of the fibers. Such an explicit statement is found in dependent Claim 18 wherein the recess shape is at least one of conical, ellipsoidal, quadrangular pyramidal, triangular pyramidal, cylindrical, semispherical, and square and is supported in the specification (e.g., page 8, lines 16-22). As such, at least these shapes are different than a fiber of the type intended to transmit optical energy along its length. The Applicants note that this is a dependent claim and that the limitations of this claim are not intended to be read into the independent claim. Nonetheless, at least the claim ought to have been objected to rather than rejected. Therefore Claim 18 alone ought to be a basis for reconsideration of the finality of the present Office action.

## Claim Rejections

### 35 U.S.C. § 103(a)

Claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pugh, III (US 4,046,454; "Pugh") or Miller (US 3,864,018; "Miller") in view of Li et al. (US 6,377,732; "Li"). The Applicants respectfully submit that the Examiner has not made out a *prima facie* case of obviousness. The Applicants respectfully reiterate and incorporate herein by reference the traversal of these rejections as set forth in the response filed on December 26, 2004. The Applicants further submit the following additional traversal.

As stated in response to the Examiner's request, the shapes of the fine metallic bodies may be conical, ellipsoidal, quadrangular pyramidal, triangular pyramidal, cylindrical, semispherical, and square. Round shapes are also possible (specification page 7, lines 8-9). These shapes clearly distinguish at least some of the claims from any of the references cited.

The Examiner accepts that both Pugh and Miller are directed towards an optical fiber and "are silent about the optical fiber is [sic] a metallic material" (Office action, page 4, para 3). The Examiner has not cited any reference that would suggest that an optical fiber can be made of a metallic material and function as an optical fiber. Lu is also directed to an optical fiber, and that fiber may be coated with a metal material. This hardly makes it a metallic body, and, *arguendo*, if it were, it could not transmit optical energy. Therefore, modifying the optical fibers as taught by Pugh or Miller using the teachings of Lu would result in an inoperative device for the purposes taught by the primary reference, and an inoperative combination cannot be used to make out a *prima facie* case of obviousness. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Additionally, Claim 1 characterizes the multilayer film as having functional properties, which are identified, *inter alia*, as a nonlinear optical effect (specification, page 11, lines 19-21). In contrast, optical fibers, which are taught by the references

cited are intended to transmit light energy without nonlinear effects, and the light is conducted in the interior of the fiber. There is no teaching or suggestion in the references that the dielectric substrates and the metal coated fiber combine to have any effect comparable to the metal particles and the dielectric thin film.

The Examiner characterizes Lu as teaching fine metallic bodies, however metal-coated fiber contains little metal by volume. In the fiber taught by Lu, the metal coating is about 10 microns thick, whereas the diameter of the fiber is 125 microns, (Lu, col 5, lines 1-15) which results in a composition by volume of metal of about 25%. To characterize such a fiber as a metallic body constitutes a reading of the claims of the present application into the prior art and constitutes impermissible hindsight. Therefore, Lu does not supply a teaching of the fine metallic bodies that are lacking in Pugh and Miller and thus not all of the elements of the present Claim 1 are taught. A *prima facie* case of obviousness has not been made out. Claims 2, and 4-14 are claims dependent on allowable Claim 1 and are allowable, without more.

With respect to Claim 6 as an example representing Claims 2 and 4-9, the Examiner has provided no suggestion that the references teach or suggest an arrangement wherein the dielectric film is made of different materials in each metal-arranged thin film, and this claim and similar claims are allowable.

Claims 10 and 11 are directed towards multilayer filters, and are dependent on Claim 1. Since the Examiner has provided no suggestion that the references teach or suggest multilayer filters, these claims are allowable.

Claim 12 is characterized by the Examiner as a product-by-process claim. The Applicants respectfully traverse this finding. Claim 12 specifically describes a possible orientation of the metallic bodies in one layer with respect to another layer. It is an apparatus claim and is allowable as such, as nothing in the prior art would suggest this arrangement.

Claims 15-20 contain similar subject matter to the claims discussed above, and have not been rejected in detail. Therefore the Applicants respectfully submit that these claims are allowable.

**35 U.S.C. § 112, second paragraph**

The Examiner has rejected Claim 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

The Applicants respectfully submit that the wording of Claim 2 is not confusing, however, in an effort to expedite the consideration of the application, Claim 2 has been amended to remove a limitation, thus both broadening the claim scope and reducing the complexity of the claim language. The Applicants respectfully submit that this amendment has overcome the rejection.

With respect to Claim 12, the Applicants have amended the claim to correct the typographic error identified by the Examiner, and expresses thanks to the Examiner for calling this error to our attention.

The Applicants respectfully traverse the rejection of Claim 12 as being contradictory in scope. The claim is explicit as written. In support of this argument the Applicants provide a non-limiting example of this arrangement.

A film with more than one layer may have a pattern where the metallic bodies are aligned in the film thickness direction (a direction orthogonal to the film surface) (specification page 8, lines 12-15). Alternatively, the metallic bodies may be aligned in rows (such as shown in Fig. 1) on the surface of each layer such that the spacing of the rows in one direction on the surface of the layer is different than another direction on the surface of the layer. Two or more layers may have the same spacing of the rows, or the spacing of one or more of the rows may be different. This meets the wording of Claim 12.

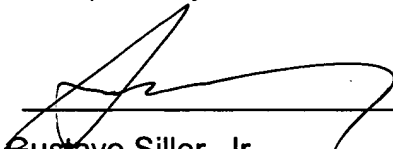
**Conclusion**

Claims 1, 2 and 4-20 were pending; Claims 2 and 12 have been amended.

For at least the reasons presented above, the Applicants respectfully submit that the pending claims are in condition for allowance.

The Examiner is respectfully requested to contact the undersigned in the event that a telephone interview would expedite consideration of the application.

Respectfully submitted,

  
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